

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-35 and 68-75 are pending in this application.

A review of the claims indicates that:

Claims 1-35 and 68-75 were previously pending.

Claims 1, 3, 16, 17, 20, 31, 68, 74, and 75 have been amended.

Claims 15, 34, and 72 have been cancelled.

Claims 36-67 were previously cancelled.

Claims 1-14, 16-33, 35, 68-71, 73-75 are currently pending in this application, with claims 1, 31, 68, and 74 being independent.

Applicant respectfully submits that the claims as presented are in condition for allowance.

35 U.S.C. § 101

Claims 68-75 stand rejected under 35 U.S.C. §101. In the September 21, 2006 Office Action, the Office asserted that:

“Regarding claims 68-75, the claims are directed toward a ‘system,’ however the claimed ‘system’ appears to be a computer program per se. The claimed computer program is functional descriptive material” (Office Action, page 2).

Without conceding the propriety of the stated rejections, and solely to advance the prosecution of this matter, the Applicant submits that the following

amendments to claims 68, 74, and 75 overcome the Office's rejection under 35 U.S.C. §101.

Claim Amendments:

Claim 68:

A system comprising:

a visual block extractor embodied at least in part in a computer readable medium to extract visual blocks from a document;

a visual separator detector embodied at least in part in a computer readable medium coupled to receive the extracted visual blocks and detect, based on the extracted visual blocks, one or more visual separators between the extracted visual blocks, wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator; and

a content structure constructor embodied at least in part in a computer readable medium coupled to receive the extracted visual blocks and the detected visual separators, and to use the extracted visual blocks and the detected visual separators to construct a content structure for the document.

Claim 74:

A system comprising:

means, embodied at least in part in a computer readable medium, for identifying a plurality of visual blocks in the document;

means, embodied at least in part in a computer readable medium, for detecting one or more separators between the visual blocks of the plurality of visual blocks, wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block

overlaps the separator, and if so how the visual block overlaps the separator; and

means, embodied at least in part in a computer readable medium, for constructing, based at least in part on the plurality of visual blocks and the one or more separators, a content structure for the document, wherein the content structure identifies the different visual blocks as different portions of semantic content of the document.

Claim 75:

A system as recited in claim 74, wherein the document is described by a tree structure having a plurality of nodes, and wherein the means for identifying the plurality of visual blocks in the document comprises:

means for identifying a group of candidate nodes of the plurality of nodes;

for each node in the group of candidate nodes:

means, embodied at least in part in a computer readable medium, for determining whether the node can be divided, and

means, embodied at least in part in a computer readable medium, for identifying, if the node cannot be divided, the node as representing a visual block.

In light of the foregoing revisions, the Applicant respectfully requests reconsideration and withdrawal of the 101 rejections of claims 68-75.

35 U.S.C. §102(b)

The Office rejects claims 1-35 and 68-75 under 35 U.S.C. §102(b) as being anticipated by Yang et al., "HTML Page Analysis Based on Visual Cues," from the 6th International Conference on Document Analysis and Recognition (ICDAR 2001), Seattle WA, USA, Copyright 2001 (hereinafter "Yang"). Applicant respectfully traverses these rejections.

Independent Claim 1

Turning first to **independent Claim 1**, without conceding the propriety of the stated rejection, and without conceding that Yang provides the teaching for which it was cited in the Action, the Applicant has amended claim 1 as indicated above. For convenience of discussion, the Applicant reproduces here portions of claim 1 as it would stand after entry of the above revisions:

A method, including:

“...detecting one or more separators between the visual blocks of the plurality of visual blocks, wherein detecting the one or more separators comprises initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator; and constructing...”

The Applicant submits that the above revisions to claim 1 are **fully supported under 35 U.S.C. § 112, 1st paragraph**, at least by page 20, line 19 to page 25, line 13 of the Applicant’s Specification, as well as by Figures 4 and 5a-5f.

The Yang publication pertains generally to automatic analysis of the semantic structure of HTML pages based on the detection of visual similarities in content objects on web pages (Yang, *Abstract*). The approach of HTML page analysis in Yang is based on an observation that layout styles of subtitles or records of the same content category, in most web pages, are consistent (Yang, *Abstract*).

As such, Yang does not disclose every element of Applicant's claim 1. For example, Yang does not show or disclose "...wherein detecting the one or more separators comprises initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator," as recited in Applicant's claim 1.

Because Yang does not show or disclose every element of Applicant's claim 1, Applicant respectfully submits that Yang does not support a §102 rejection of claim 1. The Applicant thus requests reconsideration and withdrawal of the §102 rejection of claim 1.

Dependent Claims 2-30

In the interest of advancing prosecution, Applicant has amended claim 1 to incorporate the features of claim 15, and has cancelled claim 15. Therefore, the rejection of claim 15 is now moot.

Claims 2-14 and 16-30 depend directly or indirectly from claim 1. For at least the reasons set forth above with respect to claim 1, Applicant submits that dependent claims 2-14 and 16-30 are also allowable and are not anticipated by Yang. Claims 2-14 and 16-30 depend from claim 1, and therefore, the comments directed above to claim 1 apply equally to these dependent claims, as well as for the additional features recited in these claims.

Regarding claims 14-30, the Office asserts that Yang discloses “detecting the one or more separators” at page 2, left column, third paragraph (*Office Action* p.6). The Office states Yang recites “[b]oundaries between different categories are marked apparently with different visual styles or separators. As we have said, the basic idea of our approach is to detect these visual cues” (Yang, page 2, left column, third paragraph). However, there is no reference in Yang to a separator list that includes one or more possible separators between the visual blocks; an analysis, for each of the visual blocks, for whether each visual block overlaps a separator of the separator list, and if it does overlap the separator, how the visual block does so; and a determination for how to treat the separator based on whether the visual block overlaps the separator, as in Applicant’s original claim 15, now incorporated in to claim 1.

Instead, Yang only describes the recognition that HTML pages often divide contents into categories in which each category holds records of related subtitles, and records in a category are often organized with visually consistent layout styles. (Yang, page 2, left column, third paragraph). Yang further describes boundaries between categories marked “apparently with different visual styles or separators” (Yang, page 2, third paragraph). This description of separators with apparent different visual styles does not show or disclose detecting separators utilizing a separator list, analyzing the separators for visual block overlap, and determining how to treat the visual block according to whether and how the visual block overlaps a separator, as in Applicant’s cancelled claim 15, now incorporated into claim 1.

The Applicant submits that Yang does not show or disclose the above recited features of claims 2-14 and 16-30, with cancelled claim 15 now incorporated into claim 1. At least for the above stated reasons, the Applicant respectfully submits that Yang does not support a §102 rejection of these claims and therefore requests reconsideration and withdrawal of the §102 rejection.

Independent Claim 31

Turning next to independent Claim 31, without conceding the propriety of the stated rejection, and without conceding that Yang provides the teaching for which it was cited in the Action, the Applicant has amended claim 31 as indicated above. For convenience of discussion, the Applicant reproduces here portions of claim 31 as it would stand after entry of the above revisions:

A computer readable medium having instructions to cause one or more processors to:

“...identify visual blocks in a document;
detect visual separators between the visual blocks, wherein instructions to detect visual separators comprise instructions to initialize a separator list that includes one or more possible visual separators between the visual blocks, analyze, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determine how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator; and
construct, based at least...”

Claims 31-35 are rejected “using the same rationale” as set forth in the rejection of claims 1-30 (*Office Action* p.6). As described above in the response to the rejection of claim 1, Yang does not show or disclose each of the features

recited in independent claim 31. Specifically, Yang does not disclose “...instructions to initialize a separator list that includes one or more possible visual separators between the visual blocks, analyze, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determine how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator,” as in Applicant’s amended claim 31.

Yang does not show or disclose at least these features recited in claim 31. Accordingly, Yang does not support a §102 rejection of claim 31, and for at least these reasons, Applicant respectfully submits that the rejection should be withdrawn.

Dependent Claims 32-35

In the interest of advancing prosecution, Applicant has amended claim 31 to incorporate the features of claim 34, and has cancelled claim 34. The rejection of claim 34 is therefore now moot.

Claims 32, 33, and 35 depend directly or indirectly from claim 31. For at least the reasons set forth above with respect to claim 31, Applicant submits that dependent claims 32, 33, and 35 are also allowable and are not anticipated by Yang. Claims 32, 33, and 35 depend from claim 31, and therefore, the comments directed above to claim 31 apply equally to these dependent claims, as well as for the additional features recited in these claims.

Independent Claim 68

Turning next to independent Claim 68, without conceding the propriety of the stated rejection, and without conceding that Yang provides the teaching for which it was cited in the Action, the Applicant has amended claim 68 as indicated above. For convenience of discussion, the Applicant reproduces here claim 68 as it would stand after entry of the above revisions:

“A system, comprising:

a visual block extractor embodied at least in part in a computer readable medium to extract visual blocks from a document;

a visual separator detector embodied at least in part in a computer readable medium coupled to receive the extracted visual blocks and detect, based on the extracted visual blocks, one or more visual separators between the extracted visual blocks, wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator; and

a content structure constructor embodied at least in part in a computer readable medium coupled to receive the extracted visual blocks and the detected visual separators, and to use the extracted visual blocks and the detected visual separators to construct a content structure for the document.”

Claims 68-75 are rejected “using the same rationale” as set forth in the rejection of claims 1-30 (Action, p.6). As described above in the response to the rejection of claim 1, Yang does not show or disclose each of the features recited in independent claim 68. Specifically, Yang does not disclose “...wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual

blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator,” as in Applicant’s amended claim 68.

Yang does not show or disclose at least these features recited in claim 68. Accordingly, claim 68 is allowable over Yang for at least these reasons, and the §102 rejection should be withdrawn.

Dependent Claims 69-73

In the interest of advancing prosecution, Applicant has amended claim 68 to incorporate the features of claim 72, and has cancelled claim 72. The rejection of claim 72 is therefore now moot.

Claims 69-71 and 73 depend directly or indirectly from claim 68. For at least the reasons set forth above with respect to claim 68, Applicant submits that dependent claims 69-71 and 73 are also allowable and are not anticipated by Yang. Claims 69-71 and 73 depend from claim 68, and therefore, the comments directed above to claim 68 apply equally to these dependent claims, as well as for the additional features recited in these claims.

Independent Claim 74

Turning next to independent Claim 74, without conceding the propriety of the stated rejection, and without conceding that Yang provides the teaching for which it was cited in the Action, the Applicant has amended claim 74, as indicated

above. For convenience of discussion, the Applicant reproduces here claim 74 as it would stand after entry of the above revisions:

“A system comprising:

means, embodied at least in part in a computer readable medium, for identifying a plurality of visual blocks in the document;

means, embodied at least in part in a computer readable medium, for detecting one or more separators between the visual blocks of the plurality of visual blocks, wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps the separator, and determining how to treat the separator based on whether the visual block overlaps the separator, and if so how the visual block overlaps the separator; and

means, embodied at least in part in a computer readable medium, for constructing, based at least in part on the plurality of visual blocks and the one or more separators, a content structure for the document, wherein the content structure identifies the different visual blocks as different portions of semantic content of the document.”

Claims 68-75 are rejected “using the same rationale” as set forth in the rejection of claims 1-30 (Action, p.6). As described above in the response to the rejection of claim 1, Yang does not show or disclose each of the features recited in independent claim 74. Specifically, Yang does not disclose a “...means, embodied at least in part in a computer readable medium, for detecting one or more separators between the visual blocks of the plurality of visual blocks, wherein the visual separator detector detects the one or more visual separators by initializing a separator list that includes one or more possible separators between the visual blocks, analyzing, for each of the visual blocks, whether the visual block overlaps a separator of the separator list, and if so how the visual block overlaps

the separator, and determining how to treat the separator based on whether the visual block overlaps the separator,” as in Applicant’s amended claim 74.

Yang does not show or disclose at least these features recited in claim 74. Accordingly, claim 74 is allowable over Yang for at least these reasons, and the §102 rejection should be withdrawn.

Dependent Claim 75

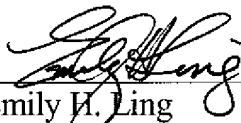
Claim 75 depends directly from claim 74. For at least the reasons set forth above with respect to claim 74, Applicant submits that dependent claim 75 is also allowable and is not anticipated by Yang. Claim 75 depends from claim 74, and therefore, the comments directed above to claim 74 apply equally to this dependent claim, as well as for the additional features recited in claim 75.

Conclusion

The Applicant submits that the claims in this application are in condition for allowance. Applicant respectfully requests that an early Notice of Allowability be issued. If there are any outstanding issues that would prevent favorable action on this application, Applicant respectfully requests that the Office contact the undersigned attorney to schedule an interview.

Respectfully Submitted,

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